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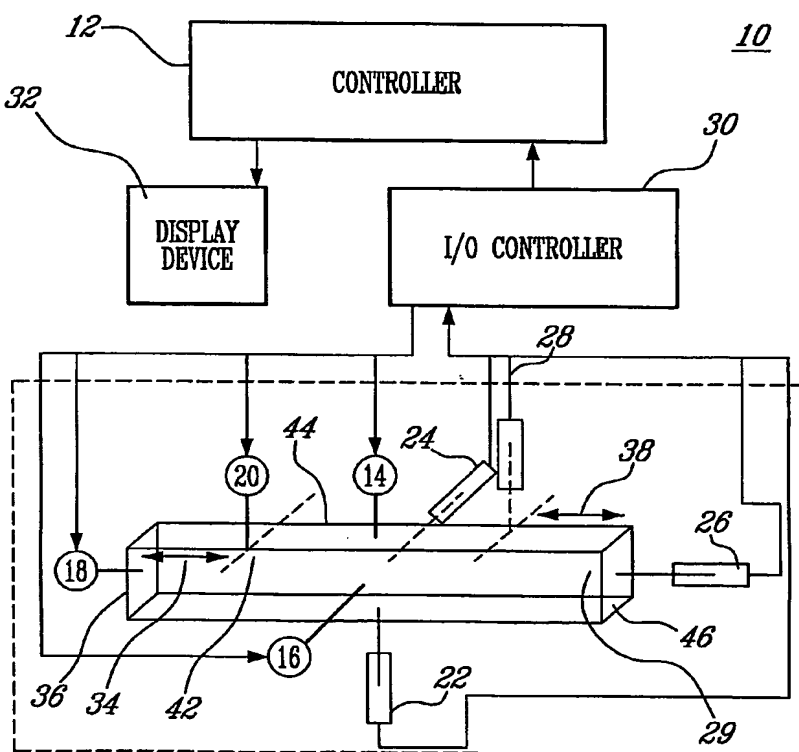
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(54) Title: SYSTEM AND METHOD FOR THE ELASTIC PROPERTIES MEASUREMENT OF MATERIALS



(57) Abstract: For heterogeneous materials such as refractories and carbon electrodes, the measurement the elastic properties of the material is difficult to achieve with high level of repeatability. The present invention is directed to a method and system for the elastic properties measurement of a material including the Elastic and Shear Modulus, as well as the Poisson's ratio of heterogeneous materials, at room and high temperature, according to a non destructive acoustic technique. The system comprises impacting devices for impacting a sample of the material so as to produce acoustic vibrations in the sample; acoustic detection devices so positioned relatively to the sample and the impacting device to capture the acoustic vibrations and to produce signals indicative of the acoustic vibrations; and a controller coupled to both the impacting devices and the acoustic detection device for controlling the impacting device, for receiving the signals from the acoustic detection devices and for using the signals to determine an elastic property of the material.



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